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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,427	11/18/2004	Toshiharu Kobayashi	2004 1501A	1786

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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
WYSZOMIERSKI, GEORGE P	

ART UNIT	PAPER NUMBER
1742	

MAIL DATE	DELIVERY MODE
07/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/509,427	KOBAYASHI ET AL.	
	Examiner	Art Unit	
	George P. Wyszomierski	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 7-10* is/are rejected.

7)☒ Claim(s) *5,6 and 11-14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/24/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Claims 5, 6, 11, 12, 13 and 14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must depend from other claims in the alternative only. The format "as claimed in claim [x] to [y]" in claims 5, 6, 11 and 12 is improper. See MPEP § 608.01(n). Claims 13 and 14 are dependent on one of these improper multiple dependent claims. Accordingly, the claims have not been further treated on the merits.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Hara et al. (U.S. patent 5,482,789).

O'Hara discloses single-crystal Ni-base superalloys, with numerous compositions in Table I of O'Hara meeting the limitations of claim 7, and alloy no. 35 in that Table meeting the limitations of claim 8. Thus, all aspects of the claimed invention are held to be fully disclosed by O'Hara et al.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Hara et al. in view of Cetel et al. (U.S. Patent 6,007,645).

The alloys of the O'Hara patent generally contain a greater amount of Ta (or of total Ta + Nb + Ti) than the presently claimed ranges. Cetel indicates that Ni-base superalloys containing the presently claimed amount of Ta (and of Ta + Nb + Ti) and otherwise similar to those of O'Hara were known in the art at the time of the invention. Therefore, the combined teachings of O'Hara et al. and Cetel et al. would have led one of ordinary skill in the art to alloys as presently claimed, i.e. containing the presently recited amount of tantalum.

6. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Hara et al. in view of Schweizer et al. (U.S. Patent 4,222,794), Meetham et al. (U.S. Patent 4,459,160), Yamazaki et al. (U.S. Patent 4,707,192), Darolia et al. (U.S. Patent 4,849,030), and Ault (U.S. Patent 4,975,124).

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Hara et al. in view of Cetel et al., and further in view of Schweizer et al., Meetham et al., Yamazaki et al., Darolia et al. and Ault.

O'Hara discloses single-crystal Ni superalloys having compositions as recited in claims 1 and 2, with O'Hara in view of Cetel rendering the compositions of claim 3 and 4 obvious for reasons as stated supra. O'Hara does not specify "directionally solidified" alloys as required by the instant claims. The examiner's position is that it was well-known in the art, at the time of the invention, to produce single-crystal Ni superalloys by directional solidification, as evidenced by any of Schweizer et al. (claim 2), Meetham et al. (column 2, lines 22-28), Yamazaki et al. (column 3, lines 30-34), Darolia et al. (claim 1), and Ault (column 1, lines 9-11). Thus, the

claimed directionally solidified alloys would have been obvious from the teachings of O'Hara combined with the knowledge of how single-crystal Ni alloys are made as taught by any of Schweizer et al., Meetham et al., Yamazaki et al., Darolia et al. and Ault.

7. Claims 7-10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,966,956. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant claims and the '956 claims are directed to single-crystal Ni base superalloys of certain compositions. While the precise ranges of the various alloying elements in those compositions are not identical in the two sets of claims, a significant overlap exists between the compositions presently claimed and those of the '956 claims. Thus, no patentable distinction is seen between the materials as presently claimed and those defined in the claims of the '956 patent.

Claims 1-4 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,966,956 in view of Schweizer et al., Meetham et al., Yamazaki et al., Darolia et al. and Ault. The '956 claims do not refer to "directionally solidified" alloys. Each of Schweizer et al., Meetham et al., Yamazaki et al., Darolia et al. and Ault indicates directional solidification to be a well-known method in the art for making single-crystal Ni base superalloys, i.e. alloys as claimed in the '956 patent. Thus, alloys made by the procedure referred to in the instant claims would have been considered an obvious modification of the single-crystal alloys defined in the '956 claims.

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

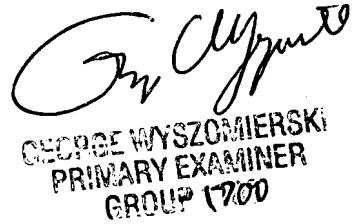
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GPW
July 17, 2007